DOCUMENT RESUME

ED 360 383 TM 020 387

AUTHOR Valdes, Luis A.; Phelps, Randy E.
TITLE Convergence between DSM Diagnoses and CBCL Behavioral Dimensions among Children.
PUB DATE Aug 92
NOTE 11p.; Paper presented at the Annual Meeting of the American Psychological Association (100th, Washington, DC, August 14-18, 1992).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adolescents; Attention Deficit Disorders; *Behavior Disorders; Behavior Patterns; *Children; Classification; Comparative Testing; Depression (Psychology); *Diagnostic Tests; Elementary Education; Elementary School Students; Hyperactivity; Males; *Mental Disorders; *Patients; Personality Problems
IDENTIFIERS *Child Behavior Checklist; *Diagnostic Statistical Manual of Mental Disorders; Disruptive Behavior

ABSTRACT

Psychopathology in outpatient children was explored using two classification systems. Clinically derived Diagnostic and Statistical Manual of Mental Disorders (Third Edition, Revised) (DSM-III R) diagnoses in three high frequency diagnostic groups were compared to empirically derived Child Behavior Checklist (CBCL) scores for an overall sample of 161 males and females and a subsample of 59 boys aged 6 to 11 years. Diagnostic groups included depressive disorders, conduct disorders, and attention deficit disorders. A fourth group, which was comprised of translated DSM-III-R Disruptive Behavior Disorders, was also analyzed. DSM diagnoses and the CBCL broad-band externalizing dimension converged among male and female clinic referred children, ages 4 to 16 years. Diagnoses and hyperactivity narrow-band scale converged among the 6- to 11-year-old male subsample. Reasons for the lack of convergence on other dimensions are discussed. Results suggest increased difficulties in classifying outpatient versus inpatient children. Implications for the classification of outpatient versus inpatient children are discussed. Support for the DSM-III-R Disruptive Behavior Disorders category is provided. (Author/SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED360383

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Luis A. Valdes

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CONVERGENCE BETWEEN DSM DIAGNOSES AND CBCL BEHAVIORAL DIMENSIONS AMONG CHILDREN

BY: Luis A. Valdes, Ph.D.

and

Randy E. Phelps, Ph.D.

Presented at the American Psychological Association Centenial Convention, Washington, DC, 1992.

TM020387

BEST COPY AVAILABLE

CONVERGENCE BETWEEN DSM DIAGNOSES AND CBCL BEHAVIORAL DIMENSIONS AMONG CHILDREN

Abstract

Psychopathology in outpatient children was explored using two classification systems. Clinically derived DSM diagnoses in three high frequency diagnostic groups were compared to empirically derived CBCL scores. Diagnostic groups included depressive disorders, conduct disorders and attention deficit disorders. A fourth group, made up of translated DSM-III-R Disruptive Behavior Disorders was also analyzed. DSM diagnoses and the CBCL broad-band Externalizing dimension converged among male and female clinic referred children, ages 4 to 16. Diagnoses and the Hyperactivity narrow-band scale converged among a 6-11 year old boys sub-sample. Reasons for the lack of convergence on other dimensions are discussed. Results suggest increased difficulties in classifying outpatient versus inpatient children. Implications for the classification of outpatient versus inpatient children are discussed. Support for the DSM-III-R Disruptive Behavior Disorders category is provided.

disorders and attention deficit disorders than with DSM depressive disorders. Second, one would expect that high CBCL Internalizing, Depressed, Uncommunicative, and Social Withdrawal scores would be more highly correlated with DSM depressive disorders than with DSM conduct disorders and attention deficit disorders.

In the present study, it was also expected that children diagnosed with a syndrome contained in the new DSM-III-R category called Disruptive Behavior Disorders would have higher CBCL Externalizing, Delinquent, Aggressive and Hyperactive scores, and lower Internalizing, Depressed, Uncommunicative and Social Withdrawal scores, than if they had been assigned in a different DSM category.

METHODS

Subjects

The original sample included 341 boys and girls, ages 4 to 16, referred for treatment to a public outpatient community mental health center in a large metropolitan city. One-hundred and sixty one cases in the overall sample and 59 cases in a 6-11 year old boys sub-sample were appropriate for the present study. One-hundred and eighty cases were in diagnostic groups that were inappropriate for the present study. These cases consisted of mixed disorders not related to any of the diagnostic groups chosen for this study.

Diagnostic Groups

Subjects were grouped according to DSM-III, and translated DSM-III-R, diagnoses. The first diagnostic group, labeled depressive disorders, included DSM's major depression, dysthymia and adjustment disorder with depressed mood. The second group, labeled conduct

disorders, included DSM's conduct disorders and oppositional deflant disorder. The third group, labeled attention deficit disorders, consisted of DSM hyperactivity disorders. A fourth group, labeled Disruptive Behavior Disorders, was composed of DSM-III conduct disorders, attention deficit disorders and oppositional deflant disorder translated into DSM-III-R diagnoses by using the crossover table in the revised DSM manual (APA, 1987).

Procedure

Intake workers at the facility referred children to appropriate services as part of their regular activities. Children were then assessed by having a parent fill out the parent version of the CBCL on the identified patient. Next, a diagnostician interviewed the parent and child as part of their normal duties. Following the interview, a DSM-III diagnosis was made according to the interviewer's clinical judgment of the information they had gathered. Interviews were unstructured and interviewers did not have access to CBCL information when assigning a diagnosis.

CBCL Externalizing and Internalizing scores across each diagnostic group were compared using a multivariate analysis of variance on the full sample. CBCL narrow-band scores in the 6-11 year old boys sub-sample were also compared across each diagnostic group using a multivariate analysis of variance. Since not all CBCL sex/age groups have the same narrow-band scales, cross group comparisons were not possible within these analyses. The sample sizes of all other sex/age groups were to small to analyze their narrow-band dimensions.

RESULTS

Broad-band Comparisons

The multivariate analysis between all three diagnostic groups for the overall sample on the CBCL Externalizing and Internalizing dimensions was statistically significant, $F(2,158) = 6.27$, $p<.001$.* These results indicate that the CBCL broad-band scores between the conduct disorders, attention deficit disorders and the depressive disorders were significantly different.

Univariate tests indicated a significant difference between all three DSM diagnostic groups on the broad-band Externalizing dimension, $F(2,158) = 8.70$, $p<.001$ but not on the broad-band Internalizing dimension, $F(2,158) = 0.16$, $p<.854$. These results indicate that the differences between diagnostic groups found in the multivariate analysis was largely due to the Externalizing dimension.

Multivariate differences were also found between broad-band Externalizing and Internalizing CBCL scores for the depressive disorders group and conduct disorders group, $F(1,125) = 8.41$, $p<.001$. Univariate analysis indicated a significant difference between these two groups on Externalizing, $F(1,125) = 10.81$, $p<.001$, but not on Internalizing, $F(1,125) = 0.86$, $p<.860$. As expected, mean CBCL scores on the Externalizing dimension were higher ($M = 72.3$) for the conduct disorders than for the depressive disorders ($M = 67.3$) .

* The assumption of homogeneity of variance was met for all multivariate analyses.

There was also a significant multivariate difference between depressive disorders and attention deficit disorders, $F(1,83) = 11.69$, $p<.001$. Univariate analysis indicated a significant difference on Externalizing, $F(1,83) = 14.58$, $p<.001$, but not on Internalizing, $F(1,83) = 0.08$, $p<.777$. As expected, mean Externalizing scores for attention deficit disorders were higher ($M = 74.2$) than mean depressive disorder scores ($M = 67.3$).

Also as expected, there was no significant multivariate or univariate differences between conduct disorders and attention deficit disorders on Externalizing or Internalizing (Conduct disorders $M = 72.3$; Attention deficit disorders $M = 74.2$).

MANOVA on DSM-III-R Disruptive Behavior Disorders.

It was found that there was a significant multivariate difference between the DSM-III-R Disruptive Behavior Disorders group and the depressive disorders group on the broad-band dimensions, $F(1,148) = 12.25$, $p<.001$. Univariate analysis indicated a significant difference between these two groups on Externalizing, $F(1,148) = 17.83$, $p<.001$, but not on Internalizing, $F(1,148) = 0.11$, $p<.744$. Inspection of the mean Externalizing scores indicates that the Disruptive Behavior Disorders ($M = 73.4$) were higher than Depressive disorders ($M = 67.3$), as predicted.

6-11 Year Old Boys Sub-sample

None of the multivariate tests of significance between diagnostic groups on broad-band dimensions for 6-11 year old boys was significant. Neither of the univariate analyses were significant although the trend was in the expected direction.

The omnibus multivariate test of significance between diagnostic groups on the narrow-band scales was marginally significant, $F(2,56) = 1.65$, $p<.065$. Univariate tests indicated that only the narrow-band Hyperactive dimension was significant, $F(2,56) = 3.79$, $p<.029$. Mean Hyperactive scores were higher for the Attention deficit disorders group ($M = 75.1$) than for the conduct disorders group ($M = 74.7$), and the depressive disorders group ($M = 68.1$). No other univariate analyses were significant.

None of the multivariate comparisons between separate pairs of diagnostic groups were significant on the narrow-band dimensions for the 6-11 year old boys sub-sample. The multivariate test between depressive disorders and attention deficit disorders approached significance, $F(1,33) = 2.00$, $p<.083$, while the univariate test between these groups showed a significant difference on the Hyperactive scale, $F(1,33) = 6.05$, $p<.019$. The mean Hyperactive scale score for depressive disorders was $M = 68.2$, and $M = 71.9$ for attention deficit disorders.

There was a significant multivariate difference between the Disruptive Behavior Disorders group and the depressive disorders group on the CBCL narrow-band dimensions for the 6-11 year old subgroup, t, $F(1,55) = 2.10$, $p<.048$. Univariate analysis indicated a significant difference between these two groups on Hyperactivity, $F(1,55) = 7.99$, $p<.007$. Inspection of the mean Hyperactivity scores indicates that Disruptive Behavior Disorder T-scores ($M = 77.0$) were higher than Depressive disorder T-scores ($M = 68.2$), as predicted. None of the other univariate comparisons were significant.

DISCUSSION

Areas of Convergence

The results presented above are notable for the areas of convergence as well as the areas of non-convergence between the DSM and CBCL scores in this sample of outpatient children. At a molar level the CBCL and the DSM appear to converge on disruptive behavior patterns. Coupled with previous research (Edelbrock & Costello, 1988; Kazdin & Heidish, 1984; Achenbach 1983), this suggests that these two classification systems converge in the assessment of overtly oppositional and intrusive behavior with milder forms of psychopathology, represented by the present outpatient group, as well as with more severe psychopathology, represented by inpatient children. This may also be indicative of a heightened sensitivity, or urgency, to disruptive behavior patterns on the part of clinicians and parents, regardless of the severity of the difficulties.

Areas Lacking Convergence

The lack of convergence at the molar level on internally directed symptomatology found in the present study is not consistent with previous research (Edelbrock & Costello, 1988; Kazdin & Heidish, 1984; Achenbach 1983). This may suggest that assessing outpatient children with problems involving withdrawal, apathy, and depression may be more difficult using the CBCL or the DSM. Perhaps these tools are less sensitive to milder forms of internalized psychopathology. Clinicians and parents may be less sensitive, or less likely, to report this type of problem. Internalized psychopathology may be neglected in favor of the more intrusive and disruptive problems when assessing outpatient children. In contrast, inpatient children with severe forms of

withdrawal, apathy, and depression may be more likely to be detected and placed in an inpatient facility.

There was almost no areas of convergence between the CBCL and the DSM at the molecular level. Hyperactivity was the one exception. Previous research on inpatient populations has shown convergence between the CBCL and the DSM at the molecular level in inpatient children (Edelbrock & Costello, 1988; Kazdin & Heidish, 1984; Achenbach 1983). There are a number of plausible explanations for this finding. Perhaps the CBCL, the DSM, or their users are not sensitive enough to detect highly specific problems in the milder ranges of psychopathology represented by the present sample. Perhaps the mixed and diffuse psychopathology found in children is more easily classified when at least some of the difficulties are severe.

Clearly, the present study is limited by its sample size, lack of reliability measures for the DSM diagnoses and CBCL scores and it may have lacked the power needed to achieve the levels of convergence found in previous studies. Nonetheless, this study at least raises questions about the validity of the use of the DSM and the CBCL on outpatient children. The problems raised by misdiagnosing children can be serious (e.g., the misuse of drug treatments, the impact of segregated classrooms, and the stigma of psychiatric diagnosis).

REFERENCES

Achenbach, T.M., & Edlebrock, C.S. (1983). Manual for the Child Behavior Checklist. Published by Department of Psychiatry, University of Vermont, Burlington, VT.

American Psychiatric Association (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.

American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (3rd ed. rev). Washington, DC: Author.

Edelbrock, C., & Costello A.J. (1988). Convergence between statistically derived behavior problem syndromes and child psychiatric diagnoses. Journal of Abnormal Child Psychology, 16, 219-231.

Kazdin, A.E., & Heidish, I.E. (1984). Convergence of clinically derived diagnoses and parent checklists among inpatient children. Journal of Abnormal Child Psychology, 12, 421-435.